Tender Reference No. AFCD/SQ/81/04

Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2005 - 2006

Shorebird Monitoring Report



Submitted by The Hong Kong Bird Watching Society Ltd. Approved Charitable Institution of a Public Character to Agriculture, Fisheries and Conservation Department, Hong Kong SAR Government

August 2006



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Waterbird Monitoring at the Mai Po Inner Deep Bay Ramsar Site

Waterbird Count Coordinator

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Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay

2005-06 Report

Report



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

MAI PO INNER DEEP BAY RAMSAR SITE WATERBIRD MONITORING PROGRAMME

Programme 2005 / 06 Shorebird Monitoring July 2005 - June 2006

Shorebird Monitoring: 2005-06 Report

Introduction

Systematic, long-term monitoring of waterbirds in the Mai Po Inner Deep Bay Ramsar Site commenced in March 1998. Counts of shorebirds (also called waders) form one part of this programme, the other components being monthly counts of waterbirds and surveys of ardeid nesting colonies. This report concerns the shorebird monitoring component from July 2005 to June 2006. This project is a part of the tender project (contract tender reference no. AFCD/SQ/81/04) and it is administered, coordinated and executed by the Hong Kong Bird Watching Society (HKBWS), and funded by the Agriculture, Fisheries and Conservation Department (AFCD).

Methodology

Shorebirds mainly occur in Hong Kong during three periods: autumn and spring for migration, and the winter. This study aims to monitor shorebirds numbers in the Mai Po Inner Deep Bay Ramsar Site through the year. Frequency of survey is higher during the main passage period (late March to late May and July to late October) but less frequent during summer. Surveys in winter time (i.e. November to mid-March) are covered by the monthly waterbird count. The schedule of this shorebird monitoring programme is as follows:

- 22 March to 1 June: one count every block of three days
- 2 to 30 June: two counts per month
- 1 July to 4 November: one count per week

The main survey site is the Mai Po Nature Reserve (Map 1) where counts are made either in the *gei wai* or from the two boardwalk birdwatching hides, depending on the height of the tide. In general, counting during the high tide period is conducted in the *gei wai* where suitable roosting areas on the reserve are provided as a result of the management activities by WWF HK; these regular and generally rather stable roosting sites allow counts to be made with a relatively high degree of accuracy for many species. In contrast, counts are made from the boardwalk hides during mid tide periods where the shorebirds feed in the intertidal area. The counts are usually made in the following procedures:

- Count birds from the boardwalk hide during the rising tide, beginning at a tidal height of around 1.9m.
- Count birds roosting in MPNR using a bicycle (essential to complete the count during the time available).
- Count birds from the boardwalk hide during the falling tide until such a time as counting is no longer possible due to distance from the observer.

The equipment used consisted of 8x or 10x binoculars and a telescope with wide angle or 20-60x zoom eyepieces. Counting was carried out by HKBWS accredited surveyors experienced in bird counting and identification, in order to achieve a higher degree of accuracy. All shorebirds present in the counting areas are counted for each species. If birds carrying leg flags for migration route studies are present, the details are also recorded, including the colour and position of the flags, the species, age and/or the extent of breeding plumage acquired.

Results

Results of all shorebird counts are presented in full in Appendices 1 and 2. The numbers of selected species are illustrated graphically in Appendix 3.

Autumn 2005

Numbers of all shorebird counts in autumn 2005 are shown in Figure 1. Numbers were low in early July but then built up gradually toward the end of October. The peak count in this autumn was 4,369 birds on 15 October, but there were also other smaller peaks of 2,503 birds on 23 August, 3,970 birds on 3 October and 4,128 birds on 31 October. The October counts probably largely comprise wintering shorebirds in the Mai Po and Deep Bay area.

Although Figure 1 could not clearly show the arrival time of passage migrant and winter visitors, figures of some individual species indicate that wintering birds might begin to arrive at the following times:

Black-tailed Godwit *Limosa limosa* – mid September (Figure 8, c.f. mid September 2004, early September 2003, late August 2002)

Eurasian Curlew *Numenius arquata* – mid September (Figure 11, c.f. mid September 2004, 2003, 2002)

Spotted Redshank *Tringa erythropus* – mid October (Figure 12, c.f. mid October 2004, 2003, late September 2002) Marsh Sandpiper *Tringa stagnatilis* – late September (Figure 14, c.f. late September 2004, mid September 2003, early September 2002)

Species that appear to be passage migrants from the figures in the autumn 2005 are Pacific Golden Plover *Pluviallis fulva* (Figure 3), Lesser Sand Plover *C. mongolus* (Figure 6), Greater Sand Plover *C. leschenaultii* (Figure 7), Bar-tailed Godwit *Limosa lapponica* (Figure 9), Whimbrel *Numenius phaeopus* (Figure 10), Wood Sandpiper *Tringa glareola* (Figure 16), Red Knot *Calidris canutus* (Figure 18) and Broad-billed Sandpiper *Limicola falcinellus* (Figure 19). Common Redshank *T. totanus* (Figure 13) and Common Greenshank *T. nebularia* (Figure 15), the two most numerous species, occurred in greatest numbers in early August and early October respectively. However, the latter may comprise mainly wintering individuals.

Winter 2005-2006

The sum of the peak counts of each shorebird species during the mid-winter period, i.e. December, January and February, comprises the winter aggregate of shorebird species. This aggregate in winter 2005-06 was recorded at 22,259 birds in the whole Deep Bay area. The five most numerous species were: Pied Avocet *Recurvirostra avosetta* (5,813), Marsh Sandpiper (2,068), Spotted Redshank (1,687), Eurasian Curlew (1,087) and Common Greenshank (764). It is also noted that a flock of 5,500 unidentified small shorebirds, presumably Kentish Plovers and Dunlins, was recorded in the December count as well. The count of Pied Avocet is the second highest count after a total of 5,864 individuals recorded in winter 2002-03.

Spring 2006

Numbers from all shorebird counts in spring 2006 are shown in Figure 20, which shows that the numbers increased with some fluctuations in the first part of spring from a total of 5,242 birds in the beginning of the 2006 spring shorebird counts, reached to a peak of 7,710 birds on 28 April (i.e. the peak daily count in spring 2006) and then numbers dropped drastically in the course of May. No other obvious influx of migratory shorebirds was noted except the peak daily count. The 2006 spring aggregate of shorebird species is 14,942 birds, which is very similar to the 2005 spring aggregate at 14,312 birds, but has a 9% decreased of the 2004 spring aggregate at 16,431 birds. It is noted that the presence of large number wintering Pied Avocets in spring 2006 could mask out the actual pattern of the other migratory shorebirds. Therefore, this analysis is done with excluding the numbers

of the Pied Avocet. The peak daily count in spring 2005 was 7,120 birds from excluding the numbers of Pied Avocet.

The previous report pointed out declines in numbers of some shorebird species (Table 1, Anon. 2005). In this spring, some species show rebounds in their peak counts, such as Pacific Golden Plover (increased three times) and Curlew Sandpiper *Calidris ferruginea* (increased 5%), while the others still show a decreasing trend of their peak counts, e.g. Red-necked Stint *Calidris ruficollis* (decreased 22%) and Ruddy Turnstone *Arenaria interpres* (decreased 13%).

			0	1 0
Species	2006 spring	2005 spring	2004 spring	2003 spring
Pacific Golden Plover Pluviallis fulva	219	54	221	358
Lesser Sand Plover Charadrius mongolus	35	30	59	115
Ruddy Turnstone Arenaria interpres	34	39	80	86
Red Knot Calidris canutus	16	5	120	62
Red-necked Stint <i>C. ruficollis</i>	1,478	1,909	2,239	2,302
Long-toed Stint <i>C. subminuta</i>	11	7	36	11
Sharp-tailed Sandpiper <i>C. acuminate</i>	68	41	300	231
Curlew Sandpiper C. ferruginea	4,151	3,947	6,000	4,535
Total spring aggregate number	14,942	14,312	16,431	16,836

Table 1. Peak counts of some shorebirds with a declining trend in recent springs.

Summer 2006

The peak counts in summer 2005 and 2006 are 155 birds and 279 birds respectively. These counts are higher than the ones in previous year, but still lower than the same figures in 2004, 2003 and 2002. These counts were mainly comprised by Common Redshanks (54 birds in July 2005) and Terek Sandpiper *Xenus cinereus* (88 birds in June 2006).

Aggregate numbers recorded

The aggregate total number of shorebirds recorded in spring and autumn is derived by using the peak count for each season added to, where possible, by the sum of influxes of new birds, assessed from the pattern of occurrence and/or differences in the amount or types of breeding plumage. In an attempt to estimate a total number of shorebirds that utilized the Mai Po Inner Deep Bay Ramsar Site

during the 12-month period from July 2005 to June 2006, the peak winter count (i.e. December to February) obtained during winter waterbird counts can also be added. However, it is not possible to rule out some overlap in individuals occurring in different seasons; consequently, such records (marked by a dash in Table 2) are excluded from the calculation.

Year	2005	2005-06	2006	2005-06	2004-05	2003-04	2002-03
Species	autumn	winter	spring	Minimum	Minimum	Minimum	Minimum
Pheasant-tailed Jacana	0	0	0	0	1	1	1
Hydrophasianus chirugus	0	0	0	0	1	1	1
Greater Painted-snipe	4	0	2	6	3	1	1
Rostratula bengalensis	4	0	2	0	5	1	T
Black-winged Stilt	-	495	-	495	439	402	296
Himantopus himantopus		470		470	407	402	270
Pied Avocet	_	5813	-	5813	4490	3500	5864
Recurvirostra avosetta		0010		0010	1150		0001
Oriental Pratincole	1	4	21	26	13	4	10
Glareola maldivarum	-	-		-0	10	-	10
Northern Lapwing	0	2	0	2	4	1	0
Vanellus vanellus			-				-
Grey-headed Lapwing	1	8	2	11	1	1	1
V. cinereus				-		-	-
Pacific Golden Plover	17	0	219	236	180	570	708
Pluviallis fulva							-
Grey Plover	40	520	-	560	582	467	307
P. squatarola							
Little Ringed Plover	45	221	5	271	174	77	191
Charadrius dubius							
Kentish Plover	66	-	6	72	29	2222	31
<i>C. alexandrinus</i>							
Lesser Sand Plover	6	0	35	41	43	70	119
C.mongolus							
Greater Sand Plover C.leschenaultii	117	0	232	349	543	430	243
Black-tailed Godwit							
Limosa limosa	-	451	950	1401	1608	1597	721
Bar-tailed Godwit							
Limosa lapponica	45	1	23	69	17	38	15
Little Curlew							
Numenius minutes	0	0	0	0	1	0	0
Whimbrel							
Numenius phaeopus	166	1	53	220	138	149	174
Eurasian Curlew							
N. arquata	-	1087	-	1087	1292	850	1014
Far Eastern Curlew							
N. madagascariensis	2	1	2	5	6	6	11
Spotted Redshank							
Tringa erythropus	-	1687	-	1687	1443	1767	1828
Common Redshank				a 1= 1		107.1	a <i>t</i> = -
T. totanus	742	190	1544	2476	2306	1934	2456

Table 2. Estimated minimum number of shorebirds utilizing the Mai Po Inner Deep Bay Ramsar Site during the 12-month period July 2005 to June 2006.

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-	764	1233	1997	1972	1951	940
1	0	22	24	22	2(26
1	0	23	24	22	26	36
1	33	1	35	52	31	45
1		1	55	52	51	40
280	290	136	706	519	382	488
256	0	361	617	476	500	557
3	76	3	82	81	81	103
4	0	15	19	85	19	42
2	0	34	36	40	81	88
1	0	4	5	11	2	44
						_
2	0	1	3	11	1	5
1	20	1	40	45	0	17
1	- 30	1	40	43	9	17
1	_	з	4	2	2	3
1		5	1	2	2	5
25	0	25	50	44	41	549
16	11	16	43	15	125	64
26	0	41	67	243	222	206
0	0	23	23	11	16	22
	_					
885	0	1478	2363	1927	2321	2597
0	0	4	4	-	F	4
0	0	4	4	5	5	4
0	9	1	10	16	4	28
0	2	1	10	10	7	20
3	1	11	15	8	47	24
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0	0	0	0	2	2	0
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95	0	4151	4246	4036	6066	4583
0	0	1	1	16	7	6
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18	0	39	57	121	86	178
	3 4 2 1 1 2 1 1 2 5 16 26 0 885 0 0 885 0 0 885 0 0 3 885 0 0 3 885 0 0 3 885 0 0 48 5 0 95	1 0 1 33 280 290 256 0 3 76 4 0 2 0 1 38 1 - 25 0 1 38 1 - 25 0 1 38 1 - 25 0 16 11 26 0 0 0 885 0 0 9 3 1 0 0 95 0 0 0	1 0 23 1 33 1 280 290 136 256 0 361 3 76 3 4 0 15 2 0 34 1 0 4 2 0 1 2 0 1 1 0 4 2 0 1 1 0 4 2 0 1 1 38 1 1 - 3 25 0 25 16 11 16 26 0 41 0 0 23 885 0 1478 0 9 1 3 1 11 0 0 0 48 0 68 - - 2 95	I 0 23 24 1 33 1 35 280 290 136 706 256 0 361 617 3 76 3 82 4 0 15 19 2 0 34 36 1 0 4 5 2 0 1 3 1 0 4 5 2 0 1 3 1 0 4 5 2 0 1 3 1 38 1 40 1 - 3 4 25 0 25 50 16 11 16 43 26 0 41 67 0 0 1478 2363 0 0 1 10 3 1 11 15	Image: constraint of the section of the sec	1 0 23 24 22 26 1 33 1 35 52 31 280 290 136 706 519 382 256 0 361 617 476 500 3 76 3 82 81 81 4 0 15 19 85 19 2 0 34 36 40 81 1 0 4 5 11 2 2 0 1 3 11 2 1 0 4 5 9 11 1 1 16 43 15 125 22 26 0 41 67 243 222 26 0 1478 2363 1927 2321 0 0 14 <

Ruff Philomachus pugnax	2	6	1	9	4	6	4
Small wader spp. (mainly Dunlin or Kentish Plover)	0	5500	0	5500	2420	-	-
NUMBER OF SPECIES	42	27	45	46	49	48	46
AGGREGATE SHOREBIRD SPECIES PEAK COUNT	2922	17209	13181	33312	27926	31114	28514

Note: a dash indicates that birds were recorded, but not thought to comprise different individuals to those in other seasons.

This all-year aggregate in 2005-06 is 33,312 which is the highest figure since 2002-03 and also is 20% higher than the same figure in previous year. Such high figure is resulted by high aggregate of the wintering shorebirds (Table 2). The sum of spring and autumn aggregates is 16,103 birds, which is 10% lower than the 17,875 birds in the sum of autumn 2004 and spring 2005.

The ten highest numbers species recorded in this 12-month period were: Pied Avocet (5,813, 17.5% of the total number of shorebirds in the same period), Curlew Sandpiper (4,426, 12.7%), Common Redshank (2,476, 7.4%), Marsh Sandpiper (2,411, 7.2%), Red-necked Stint (2,363, 7.1%), Common Greenshank (1,997, 6.0%), Spotted Redshank (1,687, 5.1%), Black-tailed Godwit (1,401, 4.2%), Eurasian Curlew (1,087, 3.3%) and Wood Sandpiper *Tringa glareola* (706, 2.1%).

Shorebird turnover rates in Hong Kong have yet to be determined; however, Howes and Bakewell (1989) quoted studies using marked birds in Morocco and Malaysia as indicating that the total number of shorebirds using a given area during migration lies in the range 3 – 4.5 times the peak daily count of passage shorebird species. Using this as the calculation basis, with peak day counts of 13,181 in spring and 2,922 in autumn, totaling 16,103, Deep Bay may have supported in the range 48,309 to 72,464 migrant shorebirds during 2005-2006.

Regional important populations

Reviews and estimates of the known shorebird population size and the 1% level of the flyway or regional population of all waterbird species that is criterion 3c for determining a wetland of international importance are listed in a publication: Waterbird Population Estimates – Third Edition (Wetland International 2002). Significant proportions of the populations of some shorebirds species pass through the Mai Po Inner Deep Bay Ramsar site. These species are listed in Table 3 with their flyway or regional population, numbers recorded in the Ramsar site and percentages of the flyway or regional during the course of July 2005 to June 2006.

Species	Flyway/regional	Number	Percentage
	population	recorded	
Pied Avocet Recurvirostra avosetta	25,000 - 100,000	5,813	5.8 - 23%
Black-tailed Godwit Limosa limosa	160,000	1,401	0.9%
Eurasian Curlew Numenius arquata	35,000	1,087	3.1%
Spotted Redshank Tringa erythropus	25,000 - 100,000	1,687	1.6 - 6.7%
Common Redshank Tringa totanus	1,000 (1% level)	2,476	2.4%
Marsh Sandpiper Tringa stagnatilis	90,000	2,411	2.7%
Common Greenshank Tringa nebularia	55,000	1,997	3.6%
Nordmann's Greenshank Tringa guttifer	250-1,000	24	2.4 - 9.6%
Terek Sandpiper Xenus cinereus	50,000	617	1.2%
Curlew Sandpiper Calidris ferruginea	180,000	4,246	2.4%

Table 3. Species recorded in flyway/regional important numbers in the Deep Bay area during July 2005 to June 2006.

Globally threatened species

With regard to species listed in BirdLife International (2000, 2004, 2006), the following were recorded during July 2005 to June 2006 (population figures from Wetland International (2002)):

- Black-tailed Godwit *Limosa limosa*: listed as Near-threatened recently, the population may have declined at a rate of 30% over the last 15 years. A total of 1,401 individuals was recorded in the 12-month period from July 2005 to June 2006 which is comprised by 451 birds in autumn and winter, and 950 birds during the spring migration. Regional population is set to 160,000 individuals and so 0.9% of the world population was recorded in Hong Kong.
- Nordmann's Greenshank *Tringa guttifer*: listed as Endangered (i.e. facing a very high risk of extinction in the wild in the near future), the world population is estimated to be 250 to 1,000 birds. One was recorded in autumn 2005 and a total of 23 birds (16 adults and 7 first-summer birds) were recorded in spring 2006, which constituted 2.3 to 9.2% of the world population. This number is similar to the figures in the previous two years (cf. 22 in spring 2005, 24 in spring 2004).
- Asian Dowitcher *Limnodromus semipalmatus*: listed as Near-threatened, the world population is estimated to be 23,000. The peak count was only 25 birds

- in spring 2005 which is lower than the peak counts of 36 and 33 birds in spring 2005 and 2004 respectively.
- Spoon-billed Sandpiper: listed as Endangered, the world population is estimated to be fewer than 2,500 individuals and the population is considered to be decreasing. In contrast to an exceptional high number in spring 2005, single bird was recorded in three counts from 13 to 19 May which was presumed to be the same individuals based on the plumage condition. This is the poorest year to this species since the spring of 2001.

Flagged shorebirds sightings

Leg-flagged shorebirds were also recorded during this monitoring programme. In the period of July 2005 to June 2006, a total of 168 sightings were reported and all were from Mai Po Nature Reserve. This total number of sightings is 25% lower than the same figure of 224 sightings in the previous year, largely due to the closure of the Mai Po Nature Reserve from 2 February to 12 April 2006, in which no report of any flagged shorebirds was submitted. The most frequently reported species is Marsh Sandpiper with 61 (36%) sightings and the second was the Common Redshank with 26 (15%) sightings. Most of these flagged shorebirds originated from Hong Kong with a total of 118 (70%) sightings. A total of 36 (21%) sightings involved the shorebirds with a single orange flag on right tibia which were flagged in Southeastern Australia and this is the largest group of overseas sightings of leg-flagged shorebirds. More details refer to Appendix 4.

Other observations

Although shorebird numbers often fluctuate widely (Anon. 2005), the trend of the spring aggregate has not shown any increase in last three years. Earth-moving works in the scrape (i.e. Pond 16/17) to create islands are aimed to provide a suitable high-tide roosting area for shorebirds. Many shorebirds were seen using these islands in the spring. In addition, disturbances to roosting shorebirds by raptors were not so frequently observed in this spring than in the past. All these factors would have made an increase of the number of migratory shorebirds. However, the 2006 spring aggregate number of shorebirds is still relatively low that is just similar to the figure of the previous year and has a decrease of 9-10% from the figures in the springs of 2002, 2003 and 2004. Some species such as Greater Sand Plover, Curlew Sandpiper and Red-necked Stint which were present in higher numbers in the past are still recorded in relatively low numbers. Declines of these migratory shorebird's numbers could be of both local and regional conservation concerns.

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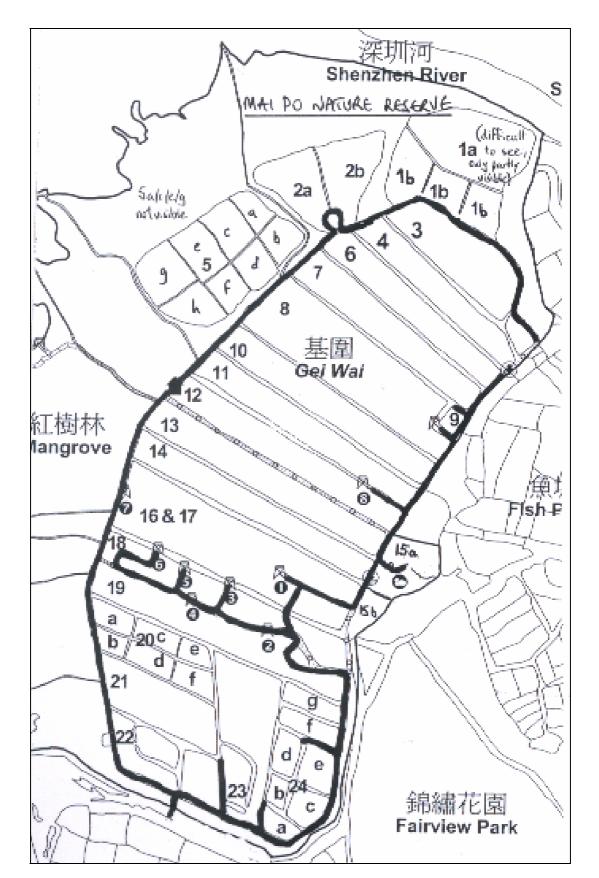
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Map 1. The Mai Po Nature Reserve – the study site of shorebird monitoring programme, 2005-06.

Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

2005-2006 Report

Y. T. Yu and H. K. Ying

Appendix 1

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in autumn 2005



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in autumn 2005																		
	1-7 Jul	8-14 Jul	15-21 Jul	22-28 Jul	29 - 4 Aug	5-11 Aug	12-18 Aug	19-25 Aug		2 -8 Sep		16-22 Sep	23-29 Sep	30 - 6 Oct	7-13 Oct	14-20 Oct	21-27 Oct	28- 3 Nov
Pheasant-tailed																		
Jacana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greater Painted-snipe	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-winged Stilt	32	52	47	102	31	56	10	10	77	105	130	139	72	265	35	321	12	31
Pied Avocet	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	542
Oriental Pratincole	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Lapwing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grey-headed	_	-	-	-		-				-	-	-	-	-	-	_	-	
Lapwing	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Pacific Golden Plover	0	0	1	0	0	0	1	17	3	2	1	0	1	13	3	0	0	3
Grey Plover	2	0	4	4	0	0	0	5	13	40	2	4	6	9	34	26	25	19
Common Ringed Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Ringed Plover	0	0	1	0	0	0	0	0	22	44	3	2	2	45	16	0	0	0
Kentish Plover	0	0	0	0	0	0	0	0	0	0	2	0	1	45	0	30	66	53
Lesser Sand Plover	0	0	1	3	0	0	3	0	0	0	6	1	0	0	0	0	00	0
Greater Sand Plover	2	0		4	8	10	25	23	59	117	55	35	6	18	54	2	2	1
		-	13			-							-		-			-
Oriental Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-tailed Godwit	0	0	2	1	8	15	22	70	130	183	225	237	244	276	337	376	2	427
Bar-tailed Godwit	0	0	0	0	0	1	0	0	0	9	43	29	45	13	6	2	0	0
Little Curlew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Whimbrel	8	8	9	7	21	79	158	166	88	157	17	149	22	102	37	33	9	4
Eurasian Curlew	10	13	20	27	38	32	41	27	7	41	60	84	91	94	74	83	81	102
Far Eastern Curlew	1	1	0	0	0	0	0	0	0	0	2	1	1	0	0	1	1	1
Spotted Redshank	0	0	0	0	0	0	0	2	3	34	17	11	8	15	0	64	8	89
Common Redshank	54	143	576	425	742	517	341	69	93	183	405	207	186	196	131	347	78	187
Marsh Sandpiper	1	2	2	2	2	6	7	94	1	207	501	842	1056	1387	1456	1785	1253	1670
Common Greenshank	34	36	162	304	525	726	617	628	853	970	827	895	905	1216	936	1210	580	750
Nordmann's																		
Greenshank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Green Sandpiper	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Wood Sandpiper	9	8	109	214	56	40	17	65	280	74	6	4	3	191	2	1	0	4
Terek Sandpiper	0	0	4	2	0	6	32	256	93	15	38	10	26	31	7	2	1	0
Common Sandpiper	0	0	0	3	0	0	0	0	3	1	1	2	0	2	1	2	0	0
Grey-tailed Tattler	0	0	0	1	0	0	4	2	1	0	2	3	0	0	0	0	0	0
Ruddy Turnstone	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0
Red-necked																		
Phalarope	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Pintail/Swinhoe's																		
Snipe	0	0	0	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0
Common Snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Long-billed Dowitcher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Asian Dowitcher	0	0	0	0	3	2	2	25	4	2	5	1	3	3	0	0	0	0
Red Knot	0	0	0	0	0	0	0	0	16	7	5	3	6	14	8	11	4	6
Great Knot	0	0	0	0	0	0	0	5	0	12	24	19	10	19	26	12	6	5
Sanderling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-necked Stint	0	0	0	0	0	0	3	885	158	122	39	2	10	0	8	25	0	2
Little Stint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temminck's Stint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long-toed Stint	0	0	0	0	3	1	0	2	0	0	1	0	0	0	0	0	0	3
Pectoral Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sharp-tailed	Ť	-	Ť	-	~	~	~	~	Ť	Ť	Ť		Ť	~	~		Ť	-
Sandpiper	0	0	0	1	0	1	1	48	0	0	31	0	0	0	0	1	0	0
Dunlin	0	0	0	0	0	0	0	1	0	0	6	2	86	13	6	30	10	222
Curlew Sandpiper	0	0	18	18	54	49	8	95	55	38	15	20	6	36	0	3	0	1
Spoon-billed	Ť						~						Ť		•		Ť	
Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Broad-billed																		
Sandpiper	0	0	0	0	0	0	0	8	3	5	11	2	18	1	0	1	0	1
Ruff	0	0	0	0	0	0	1	0	0	1	1	1	1	2	0	0	0	2
Sand Plover sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small wader sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large tringa sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	155	264	974	1118	1491	1542	1293	2503		-	-	2707	2817	3970	3177		2138	4128
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Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

2005-2006 Report

Y. T. Yu and H. K. Ying

Appendix 2

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in spring 2006.



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in spring 2006

	22-24	25-27	28-30	31-2	25	6-8	9-11	12-14	15-17	18-20	21.22	24-26	27-29	30-2	3-5	6-8	9-11	12-14	15-17	18-20	21-23	24-26	27-29	30-1	2-15	16-30
	22-24 Mar.	25-27 Mar.	28-30 Mar.	Apr.	3-5 Apr.	o-ð Apr.	9-11 Apr.	12-14 Apr.	Apr.	18-20 Apr.	21-25 Apr.	24-20 Apr.	27-29 Apr.	May	3-5 May	0-8 May	9-11 May	May	May	18-20 May	May	24-26 May	May	Jun	2-15 Jun.	Jun.
Pheasant-tailed	iviai.	wiai.	wiai.	Арі.	Арі.	Api.	Apı.	Apr.	Api.	Api.	Apr.	Apr.	Apr.	wiay	Wiay	wiay	way	wiay	Way	Widy	wiay	wiay	wiay	Juii	Juli.	Jun.
Jacana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greater	0		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0		0	0	0
Painted-snipe Black-winged	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0
Stilt	0	193	291	327	299	217	141	54	25	12	68	81	28	95	18	67	50	30	81	67	53	64	7	55	60	57
Pied Avocet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oriental	0		10	0				0			0			0		0		0	0	0				1.5		0
Pratincole Northern	0	0	10	0	8	1	0	0	4	3	0	0	3	0	0	0	6	0	0	0	3	1	21	15	1	0
Lapwing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grey-headed																										
Lapwing	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Golden Plover	19	1	3	15	1	13	2	219	50	67	30	11	2	0	1	0	3	5	9	10	3	0	0	0	0	0
Grey Plover	163	220	33	108	97	72	69	45	75	25	73	69	47	18	5	0	25	24	29	24	18	13	18	0	11	9
Common Ringed																										
Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Ringed Plover	5	0	3	0	3	0	0	0	0	1	0	0	0	0	0	1	2	0	1	0	1	1	0	0	0	0
Kentish Plover	2	3	1	4	0	4	5	3	1	6	4	2	0	0	2	0	0	0	1	0	0	0	0	0	0	0
Lesser Sand																										
Plover Creater Sand	0	0	0	0	1	2	13	2	0	35	8	15	8	0	5	1	6	3	7	2	4	8	4	2	0	0
Greater Sand Plover	33	36	1	23	15	42	232	145	89	66	95	69	80	0	20	7	99	27	61	51	35	37	19	18	2	0
Oriental Plover	0	0	0	0	0	42	0	0	0	00	0	09	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-tailed				-						-																
Godwit	204	262	77	206	312	297	141	517	950	826	396	474	358	107	85	11	13	10	20	17	6	19	16	10	21	13
Bar-tailed Godwit	1	1	5	3	3	4	1	2	12	23	5	0	1	0	0	1	1	0	0	1	0	0	0	0	1	0
Little Curlew	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Whimbrel	1	0	0	0	1	1	0	0	11	3	29	8	51	0	53	0	14	20	24	15	15	12	8	8	15	4
Eurasian Curlew	368	336	197	181	119	71	45	42	39	40	0	17	28	0	28	0	39	4	24	0	24	25	27	25	26	26
Far Eastern	1	1	1	0	1	0	0	1	1	1	0	0	2	0	1	0	0	0	0	0	0	1	1	1	0	0
Curlew Spotted	1	1	1	0	1	0	0	1	1	1	0	0	2	0	1	0	0	0	0	0	0	1	1	1	0	0
Redshank	1190	872	799	1035	1448	1094	208	826	938	781	978	879	772	472	368	0	368	234	156	85	0	0	0	0	0	0
Common																										
Redshank	337	321	264	431	117	357	331	1079 2344	779 1940	1544	677	1412 424	1132	170	1101	363	254 0	210	270	157	88	70	39 0	27 0	1 0	10
Marsh Sandpiper Common	2319	1347	1593	1630	2411	2025	1545	2344	1940	735	1027	424	167	53	52	5	0	2	6	4	0	0	0	0	0	2
Greenshank	511	739	470	596	652	865	514	546	827	740	1089	848	565	643	1233	869	734	380	244	183	73	38	15	14	23	3
Nordmann's																										
Greenshank	0	1	2	0	9	0	0	0	0	1	2	0	1	1	5	1	0	2	3	5	2	4	0	0	2	0
Green Sandpiper Wood Sandpiper	0	1 4	0	0	1 2	0 2	1 2	0	0 136	0	0 44	0 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terek Sandpiper	0	2	1	1	5	8	4	33	72	361	118	166	144	3	168	87	143	173	202	245	226	221	212	156	88	130
Common																										
Sandpiper	0	3	1	2	0	0	0	0	3	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0
Grey-tailed Tattler	0	0	0	0	0	0	0	0	1	2	3	4	10	0	7	15	13	5	4	2	2	3	0	0	0	1
Ruddy	0	0	0	0	0	0	0	0	1	2	5	-	10	0		15	15	5	-	2	2	5	0	0	0	1
Turnstone	0	0	0	0	0	0	3	3	17	17	18	34	31	0	12	8	13	10	5	8	0	0	0	0	1	0
Red-necked	0		0											0			0		0	0		0		0		0
Phalarope Pintail/Swinhoe's	0	3	0	0	0	3	4	2	2	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Snipe	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Snipe	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long-billed Dowitcher	0			2		1			_	1				_		_	_	_		_	~	_				_
Dowitcher Asian Dowitcher	0	0	2	3	2	1 2	0	2	0	1 3	2	0 10	0	0	0 25	0 2	0	0	0 4	0 5	0 4	0	0	0	0	0
Red Knot	5	0	0	2	2	1	3	1	8	6	4	6	3	0	23	0	0	15	16	13	7	7	11	12	0	0
Great Knot	8	31	2	38	2	39	22	21	41	34	10	12	5	1	6	8	0	3	24	29	30	37	8	5	3	2
Sanderling	1	1	0	1	0	0	0	0	3	5	3	23	11	0	3	3	0	3	1	0	0	0	0	0	0	0
Red-necked Stint		-		9	0	6	38	7	107 0	144	179	1141	78 0	33 0	94 0	172 0	243 0	375 0	1133	1478 0	805	167 0	26 0	12 0	0	0
Little Stint	5	7	1		0	0		0	U	1	1	1	0	0	0	0	0	U	1	U	0	U	U	U	U	U
Little Stint Temminck's		-	1 0	0	0	0	0																ļ			
Little Stint Temminck's Stint	5	7	-		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temminck's Stint Long-toed Stint	5 0	7	0	0				0	0 7	0 4	0 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temminck's Stint Long-toed Stint Pectoral	5 0 0 0	7 0 1 0	0	0 0 0	0	0	0	6	7	4	5	1	1	5	11	0	0	0	0	0	0	1	0	0	0	0
Temminck's Stint Long-toed Stint Pectoral Sandpiper	5 0 0	7 0 1	0	0	0	0	0																			
Temminck's Stint Long-toed Stint Pectoral	5 0 0 0	7 0 1 0	0	0 0 0 0	0	0	0	6	7	4	5	1	1	5	11	0	0	0	0	0	0	1	0	0	0	0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin	5 0 0 0 0	7 0 1 0 0	0 0 0 0	0 0 0 0 0	0 1 0	0 0 0	0 0 0	6 0	7 0	4	5 0	1	1	5	11 0	0	0	0	0	0	0	1	0	0	0	0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew	5 0 0 0 0 0 2	7 0 1 0 0 0 0	0 0 0 0 0	0 0 0 0	0 1 0 0	0 0 0 0	0 0 0 0	6 0 0 0	7 0 8 0	4 0 21 0	5 0 6 0	1 0 21 0	1 0 7 0	5 0 2 0	11 0 4 0	0 0 4 0	0 0 0 0	0 0 22 0	0 0 68 0	0 0 52 0	0 0 28 0	1 0 26 0	0 0 12 0	0 0 15 0	0 0 0 0	0 0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper	5 0 0 0 0	7 0 1 0 0	0 0 0 0	0 0 0 0	0 1 0 0	0 0 0	0 0 0	6 0 0	7 0 8	4 0 21	5 0 6	1 0 21	1 0 7	5 0 2	11 0 4	0 0 4	0 0 0	0 0 22	0 0 68	0 0 52	0 0 28	1 0 26	0 0 12	0 0 15	0 0 0 0	0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew	5 0 0 0 0 0 2	7 0 1 0 0 0 0	0 0 0 0 0	0 0 0 0	0 1 0 0	0 0 0 0	0 0 0 0	6 0 0 0	7 0 8 0	4 0 21 0	5 0 6 0	1 0 21 0	1 0 7 0	5 0 2 0	11 0 4 0	0 0 4 0	0 0 0 0	0 0 22 0	0 0 68 0	0 0 52 0	0 0 28 0	1 0 26 0	0 0 12 0	0 0 15 0	0 0 0 0	0 0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper Spoon-billed Sandpiper Broad-billed	5 0 0 0 0 2 65 0	7 0 1 0 0 0 0 354	0 0 0 0 0 0 60	0 0 0 1 0 49	0 1 0 0 5 0	0 0 0 0 67	0 0 0 105 0	6 0 0 104 0	7 0 8 0 117 0	4 0 21 0 221 0	5 0 6 0 1046 0	1 0 21 0 881 0	1 0 7 0 4151 0	5 0 2 0 6 0	11 0 4 0 773 0	0 0 4 0 163 0	0 0 0 1111 0	0 0 22 0 25 1	0 0 68 0 88 1	0 0 52 0 65 1	0 0 28 0 57 0	1 0 26 0 24 0	0 0 12 0 25 0	0 0 15 0 8 0	0 0 0 23 0	0 0 0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper Spoon-billed Sandpiper Broad-billed Sandpiper	5 0 0 0 0 2 65 0 1	7 0 1 0 0 0 0 354 0 2	0 0 0 0 0 0 60 0 0	0 0 0 1 0 49 0 1	0 1 0 0 5 0 0	0 0 0 0 67 0 1	0 0 0 105 0	6 0 0 104 0 3	7 0 8 0 117 0 21	4 0 21 0 221 0 6	5 0 6 0 1046 0 11	1 0 21 0 881 0 17	1 0 7 0 4151 0 9	5 0 2 0 6 0 1	11 0 4 0 773 0 39	0 0 4 0 163 0 1	0 0 0 1111 0 17	0 0 22 0 25 1 2	0 0 68 0 88 1 15	0 0 52 0 65 1 14	0 0 28 0 57 0 20	1 0 26 0 24 0 5	0 0 12 0 25 0 1	0 0 15 0 8 0 0	0 0 0 23 0 0	0 0 0 0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper Spoon-billed Sandpiper Broad-billed Sandpiper Ruff	5 0 0 0 0 2 65 0 1	7 0 1 0 0 0 0 354 0 2 1	0 0 0 0 0 0 60 0 0 0 0	$ \begin{array}{c} 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 49 \\ 0 \\ 1 \\ 0 \\ 0 \\ \end{array} $	0 1 0 0 5 0 0 0 0	0 0 0 0 67 0 1 0	0 0 0 105 0 0 0	6 0 0 104 0 3 0	7 0 8 0 117 0 21 0	4 0 21 0 221 0 6 0	5 0 6 0 1046 0 11 0	1 0 21 0 881 0 17 0	1 0 7 0 4151 0 9 0	5 0 2 0 6 0 1 0	11 0 4 0 773 0 39 0	0 0 4 0 163 0 1 0	0 0 0 1111 0 177 0	0 0 22 0 25 1 2 0	0 0 68 0 88 1 15 0	$ \begin{array}{c} 0 \\ 52 \\ 0 \\ 65 \\ 1 \\ 14 \\ 0 \end{array} $	0 0 28 0 57 0 20 0	1 0 26 0 24 0 5 0	0 0 12 0 25 0 1 0	0 0 15 0 8 0 0 0	0 0 0 23 0 0 0 0	0 0 0 0 0 0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper Spoon-billed Sandpiper Broad-billed Sandpiper Ruff Small wader sp.	5 0 0 0 0 2 65 0 1	7 0 1 0 0 0 0 354 0 2	0 0 0 0 0 0 60 0 0	0 0 0 1 0 49 0 1	0 1 0 0 5 0 0	0 0 0 0 67 0 1	0 0 0 105 0	6 0 0 104 0 3	7 0 8 0 117 0 21	4 0 21 0 221 0 6	5 0 6 0 1046 0 11	1 0 21 0 881 0 17	1 0 7 0 4151 0 9	5 0 2 0 6 0 1	11 0 4 0 773 0 39	0 0 4 0 163 0 1	0 0 0 1111 0 17	0 0 22 0 25 1 2	0 0 68 0 88 1 15	0 0 52 0 65 1 14	0 0 28 0 57 0 20	1 0 26 0 24 0 5	0 0 12 0 25 0 1	0 0 15 0 8 0 0	0 0 0 23 0 0	0 0 0 0 0 0
Temminck's Stint Long-toed Stint Pectoral Sandpiper Sharp-tailed Sandpiper Dunlin Curlew Sandpiper Spoon-billed Sandpiper Broad-billed Sandpiper Ruff	5 0 0 0 0 2 65 0 1 1 0	$ \begin{array}{c} 7 \\ 0 \\ 1 \\ 0 \\ 0 \\ 354 \\ 0 \\ 2 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	0 0 0 0 0 0 60 0 0 0 0 0 0	0 0 0 1 0 49 0 1 0 0	0 1 0 0 5 0 0 0 0 0 0 0	0 0 0 67 0 1 0 0 0	0 0 0 105 0 0 0 0 0	6 0 0 104 0 3 0 0 0	7 0 8 0 117 0 21 0 0 0	4 0 21 0 221 0 6 0 0	5 0 6 0 1046 0 11 0 0 0 0	1 0 21 0 881 0 17 0 0	1 0 7 0 4151 0 9 0 0 0 0	5 0 2 0 6 0 1 0 0	11 0 4 0 773 0 39 0 0 0	0 0 4 0 163 0 1 0 0 0	0 0 0 1111 0 177 0 0	0 0 22 0 25 1 25 0 0 0 0	0 0 68 0 88 1 15 0 0	$ \begin{array}{c} 0 \\ 52 \\ 0 \\ 65 \\ 1 \\ 14 \\ 0 \\ 0 \\ 0 \end{array} $	0 0 28 0 57 0 20 0 0	1 0 26 0 24 0 5 0 0	0 0 12 0 25 0 1 0 0	0 0 15 0 8 0 0 0 0 0	0 0 0 23 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0

Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

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Y. T. Yu and H. K. Ying

Appendix 3



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

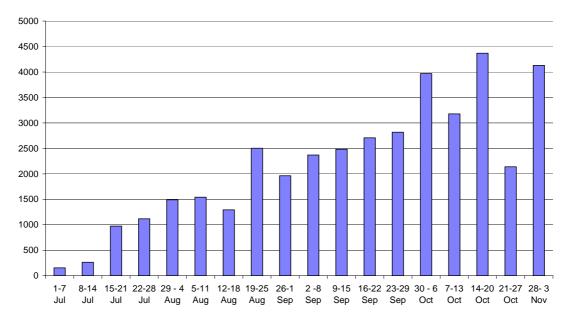
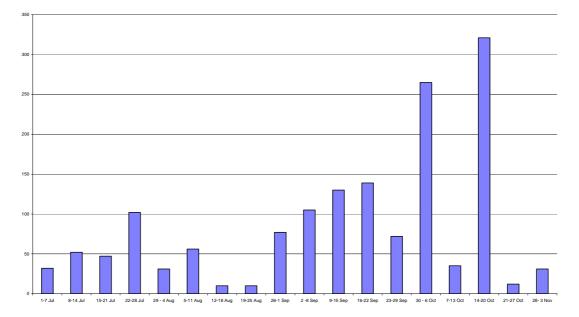


Figure 1. Total number of waders recorded at Mai Po Inner Deep Bay, autumn 2005

Figure 2. Counts of Black-winged Stilt at Mai Po Inner Deep Bay Ramsar Site, autumn 2005



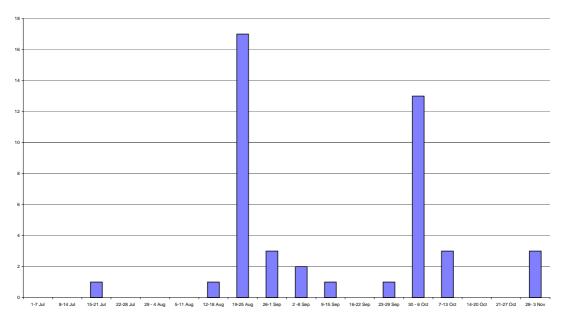
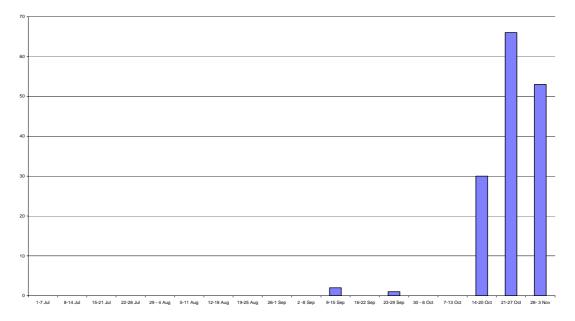


Figure 3. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 4. Counts of Kentish Plover at Mai Inner Deep Bay Ramsar Site, autumn 2005



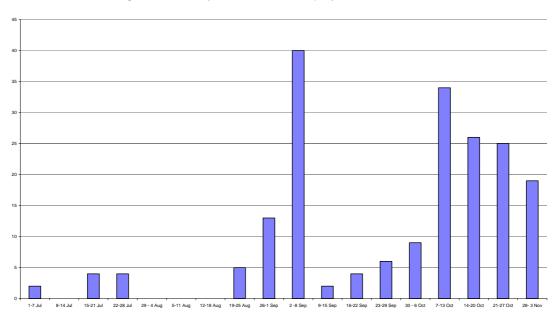
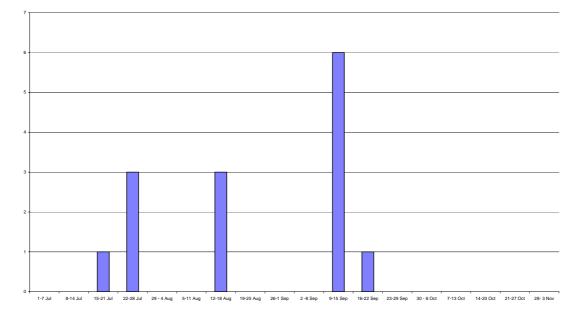


Figure 5. Counts of Grey Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 6. Counts of Lesser Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2005



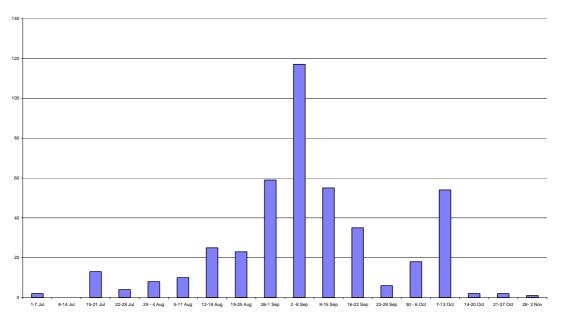
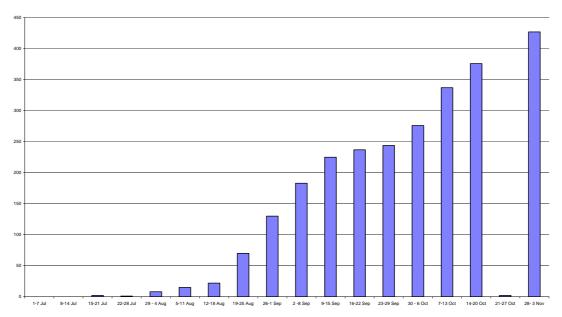


Figure 7. Counts of Greater Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 8. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2005



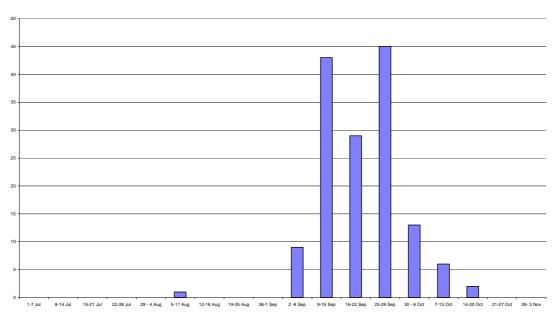


Figure 9. Counts of Bar-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

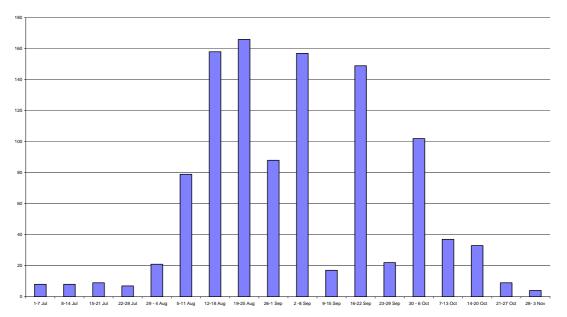


Figure 10. Counts of Whimbrel at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

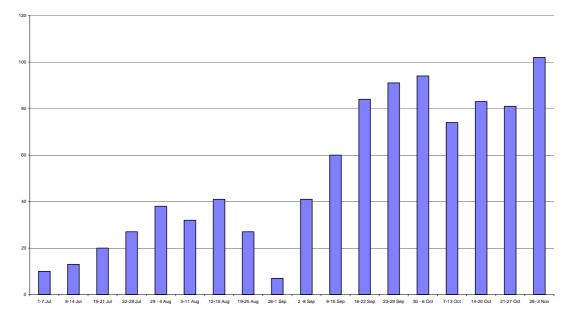
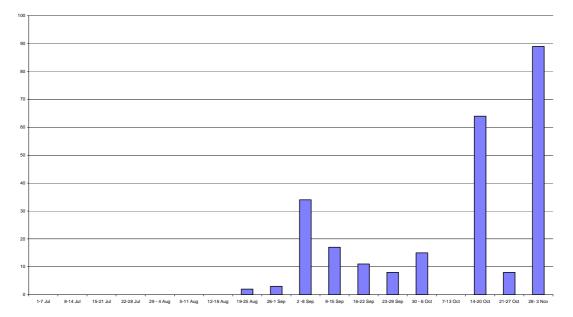


Figure 11. Counts of Eurasian Curlew at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 12. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2005



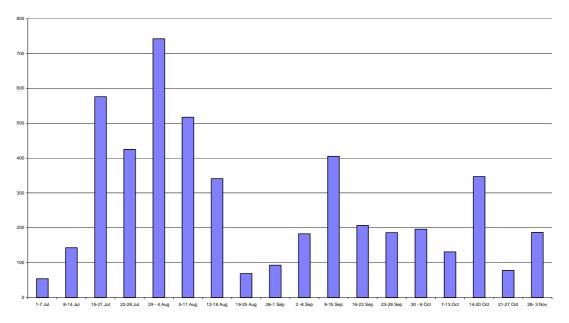
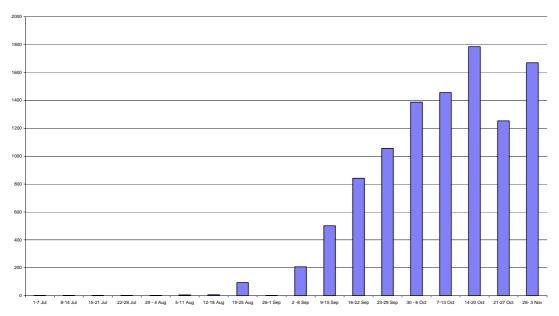


Figure 13. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 14. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2005



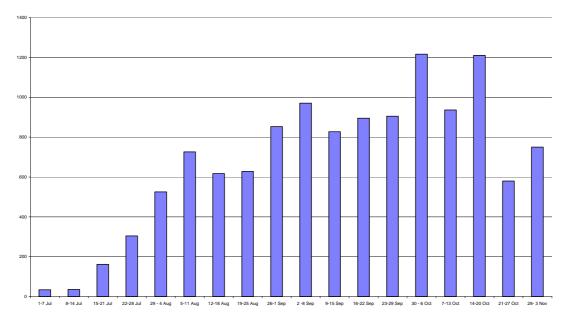
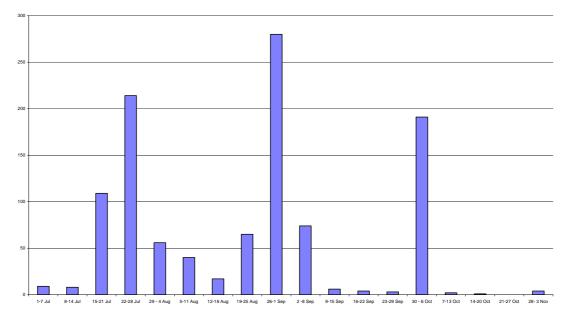


Figure 15. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 16. Counts of Wood Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2005



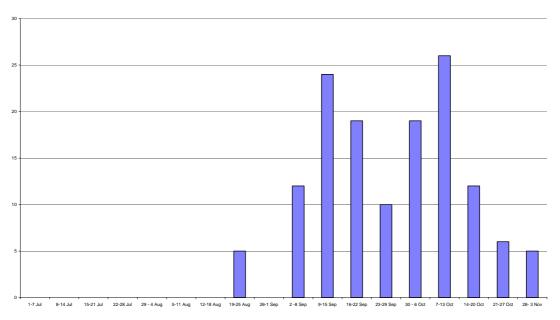


Figure 17. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

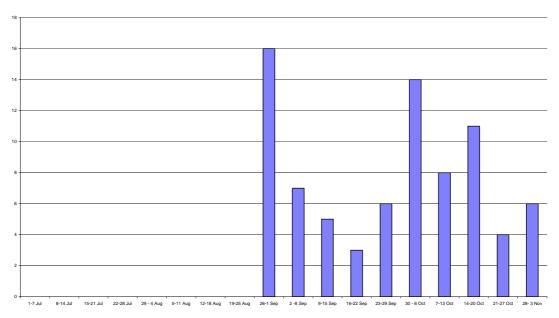


Figure 18. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

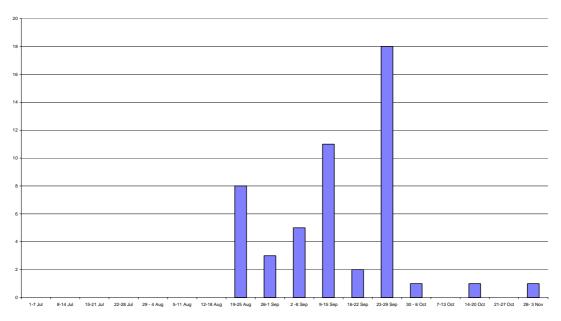
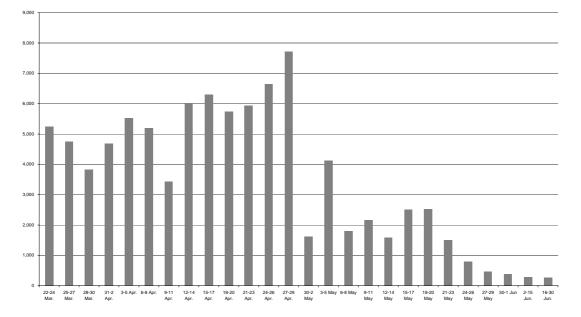


Figure 19. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2005

Figure 20. Total number of waders recorded at Mai Po Inner Deep Bay, spring 2006



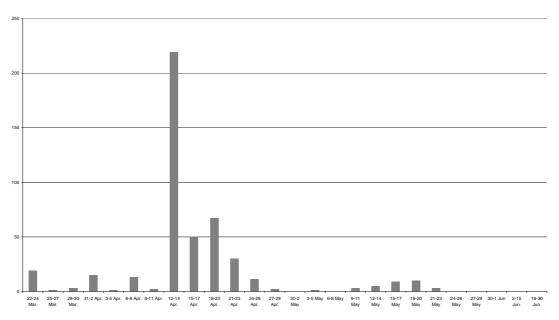
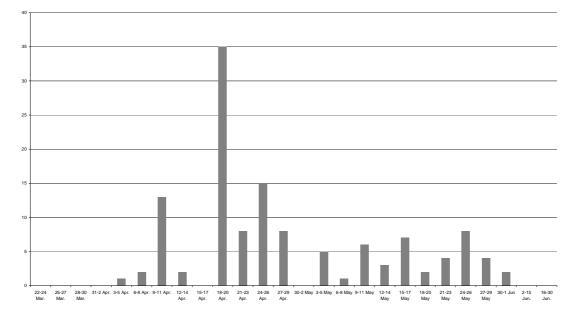


Figure 21. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 22. Counts of Lesser Sandplover at Mai Po Inner Deep Bay Ramsar Site, spring 2006



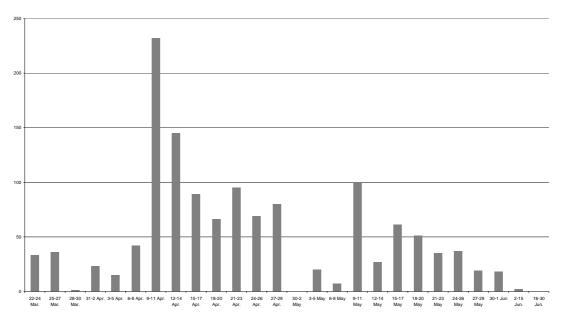
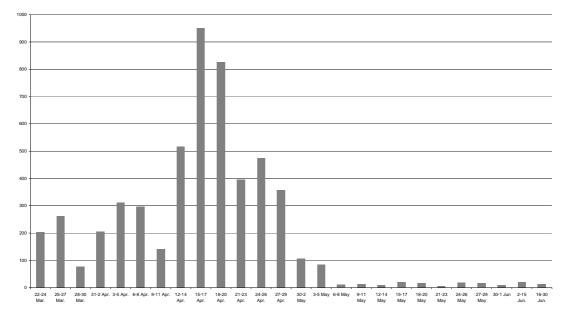


Figure 23. Counts of Greater Sandplover at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 24. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, spring 2006



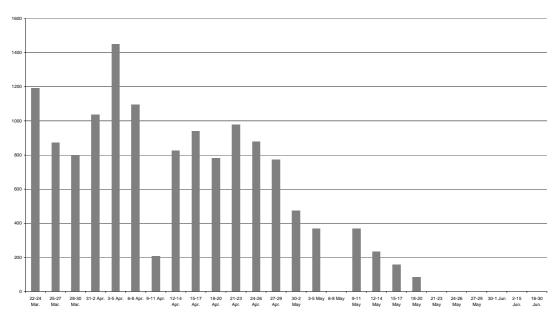
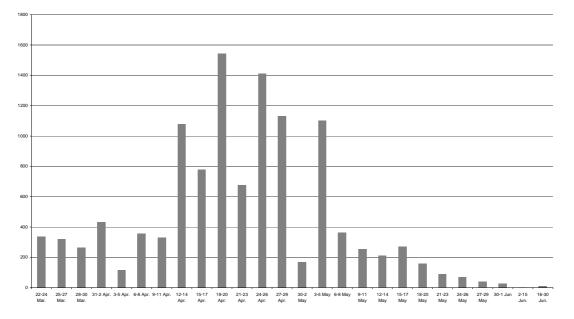


Figure 25. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 26. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, spring 2006



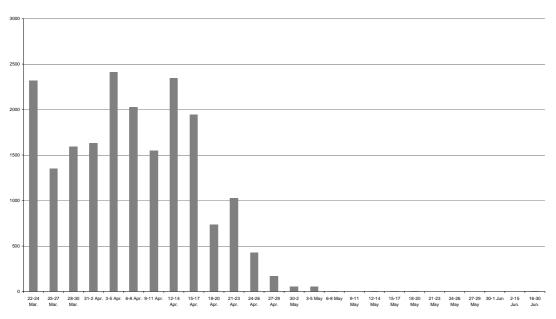
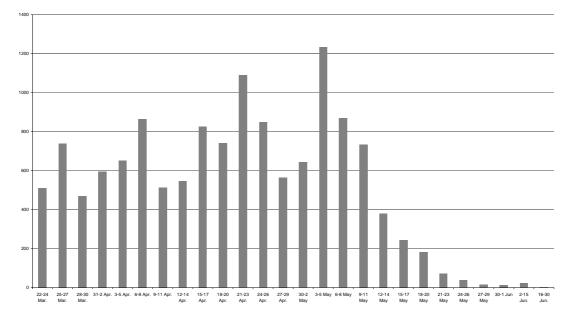


Figure 27. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 28. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, spring 2006



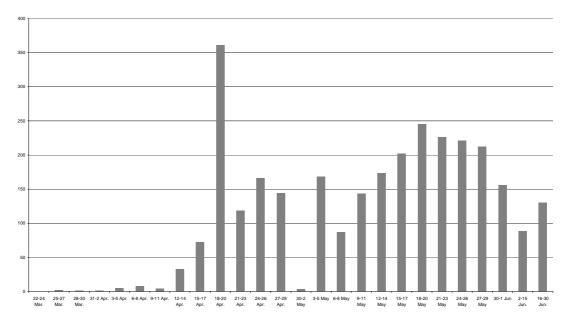
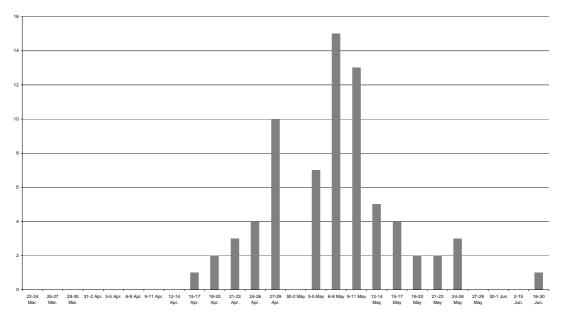


Figure 29. Counts of Terek Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 30. Counts of Grey-tailed Tattler at Mai Po Inner Deep Bay Ramsar Site, spring 2006



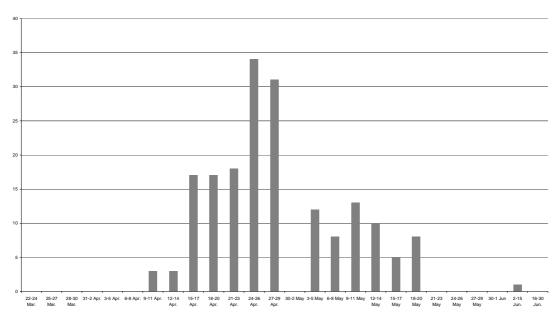
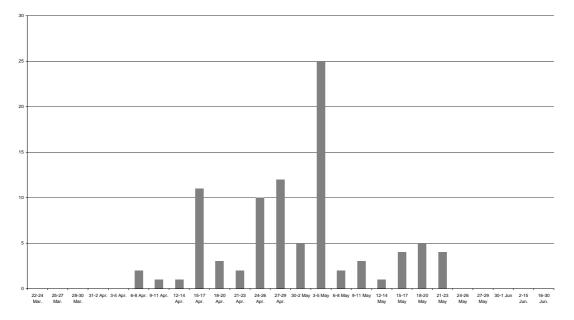


Figure 31. Counts of Ruddy Turnstone at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 32. Counts of Asian Dowitcher at Mai Po Inner Deep Bay Ramsar Site, spring 2006



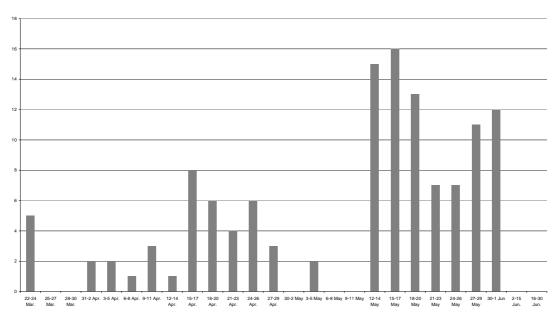
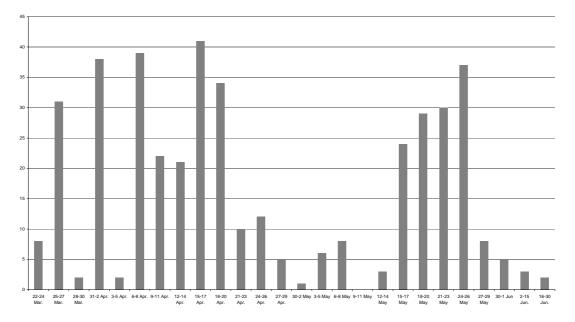


Figure 33. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 34. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, spring 2006



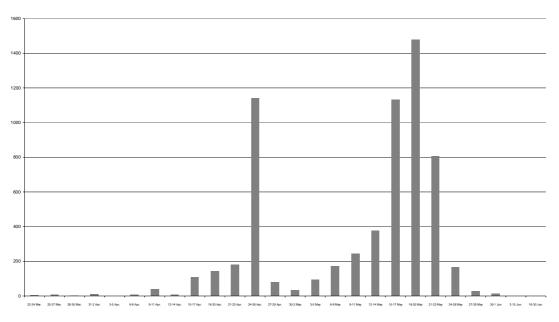
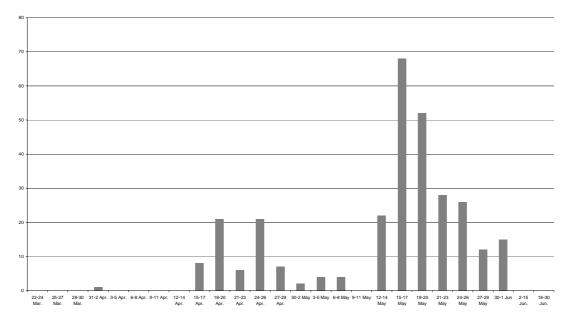


Figure 35. Counts of Red-necked Stint at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 36. Counts of Sharp-tailed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2006



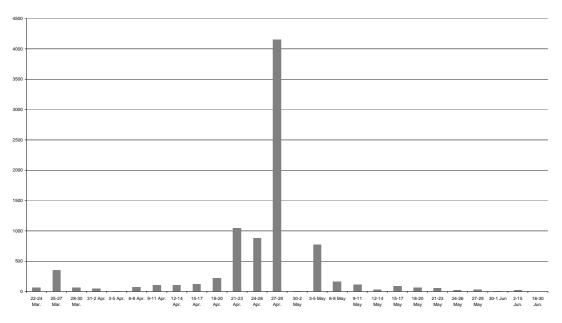


Figure 37. Counts of Curlew Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Figure 38. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2006

Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

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Y. T. Yu and H. K. Ying

Appendix 4

Records of leg-flagged shorebirds in autumn 2005 and spring 2006



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

Records of leg-flagged shorebirds in autumn 2005 and spring 2006

				Right Leg				Left Leg			
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position
21-Jul-05	Neil Fifer	Common Redshank	50	White	Above	Yellow	Below				
21-Jul-05	Neil Fifer	Curlew Sandpiper	100	Orange	Above	Yellow	Below				
3-Aug-05	Ying Hak King	Common Redshank	100	White	Above	Yellow	Below				
7-Aug-05	Samson So	Common Greenshank	25	White	Above	Yellow	Below				
8-Aug-05	Neil Fifer	Common Greenshank	0	White	Above	Yellow	Below				
8-Aug-05	Neil Fifer	Common Redshank	0	White	Above	Yellow	Below				
17-Aug-05	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
17-Aug-05	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
17-Aug-05	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
23-Aug-05	Yu Yat Tung	Black-tailed Godwit	0	White	Above	Yellow	Below				
23-Aug-05	Yu Yat Tung	Red-necked Stint	0	Orange	Above						
23-Aug-05	Yu Yat Tung	Red-necked Stint	0	Orange	Above						
23-Aug-05	Yu Yat Tung	Red-necked Stint	0	Orange	Above						
23-Aug-05	Yu Yat Tung	Red-necked Stint	0	Orange	Above						
2-Sep-05	Neil Fifer	Common Greenshank	0	White	Above	Yellow	Below				
2-Sep-05	Neil Fifer	Common Redshank	0	White	Above	Yellow	Below				
5-Sep-05	Neil Fifer	Common Redshank	0	White	Above	Yellow	Below				
6-Sep-05	Ying Hak King	Black-tailed Godwit	0	White	Above	Yellow	Below				
6-Sep-05	Ying Hak King	Common Greenshank	0	White	Above	Yellow	Below				
6-Sep-05	Ying Hak King	Common Redshank	0	White	Above	Yellow	Below				
6-Sep-05	Ying Hak King	Common Redshank	0	White	Above	Yellow	Below				
6-Sep-05	Ying Hak King	Grey Plover	25	White	Above	Yellow	Below				
8-Sep-05	Liu Jianzhong	Grey Plover	25	White	Above	Yellow	Below				
15-Sep-05	Yu Yat Tung	Black-tailed Godwit	0	White	Above	Yellow	Below				
15-Sep-05	Yu Yat Tung	Black-tailed Godwit	0	White	Above	Yellow	Below				
15-Sep-05	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
15-Sep-05	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
15-Sep-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
20-Sep-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
21-Sep-05	Neil Fifer	Black-tailed Godwit	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Eurasian Curlew	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
15-Oct-05	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
19-Oct-05	Neil Fifer	Eurasian Curlew	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
	at a rung	Common Reusliank	v	** inte	10000	1 chow	Delow	ļ			

									1		
	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
22-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
25-Mar-06	Ying Hak King	Curlew Sandpiper	50	White	Above	Yellow	Below				
25-Mar-06	Ying Hak King	Great Knot	0	White	Above	Blue	Below				
25-Mar-06	Ying Hak King	Grey Plover	0	White	Above	Yellow	Below				
25-Mar-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
25-Mar-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
30-Mar-06	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
30-Mar-06	Yu Yat Tung	Eurasian Curlew	0	White	Above	Yellow	Below				
30-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
30-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
30-Mar-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
1-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
1-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
1-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
1-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
1-Apr-06	Ying Hak King	Spotted Redshank	0	White	Above	Yellow	Below				
4-Apr-06	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below				
4-Apr-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
4-Apr-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
4-Apr-06	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below				
5-Apr-06	Zhang Gaofeng	Common Redshank	Not recorded	Yellow	Above					Metal ring	below
6-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
6-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				
6-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
6-Apr-06	0 0	Marsh Sandpiper	0	White	Above	Yellow	Below				
6-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
6-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
6-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
11-Apr-06	0 0	Common Greenshank	0	White	Above	Yellow	Below				
11-Apr-06		Common Greenshank	0	White	Above	Yellow	Below				
	0 0	Common Greenshank	0	White	Above	Yellow	Below				
11-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
11-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
11-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
		Marsh Sandpiper	0	White	Above	Yellow	Below				
11-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
11-Apr-06		Marsh Sandpiper Marsh Sandpiper	0	White	Above	Yellow	Below			$\left \right $	
-										$\left \right $	
11-Apr-06 14-Apr-06	Ying Hak King Yu Yat Tung	Marsh Sandpiper Black-tailed Godwit	0	White White	Above	Yellow	Below			$\left \right $	
	0				Above	Yellow	Below			$\left \right $	
17-Apr-06	0 0	Bar-tailed Godwit	0	Yellow	Above						
17-Apr-06	0 0	Curlew Sandpiper	0	Orange	Above	X/ 11					
17-Apr-06		Curlew Sandpiper	0	White	Above	Yellow	Below				
17-Apr-06		Curlew Sandpiper	0	White	Above	Yellow	Below				
17-Apr-06	0 0	Great Knot	0	Yellow	Above						
17-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
17-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below				
17-Apr-06	Ying Hak King	Marsh Sandpiper	0	White	Above	Yellow	Below				

								1	1	,
17-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below			
17-Apr-06	0 0	Marsh Sandpiper	0	White	Above	Yellow	Below			
17-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below			
17-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below			
17-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below			
17-Apr-06	Ying Hak King	Terek Sandpiper	0	White	Above	Yellow	Below			
18-Apr-06	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below			
	Yu Yat Tung	Common Redshank	0	White	Above	Yellow	Below			
18-Apr-06	Neil Fifer	Marsh Sandpiper	Not recorded	White	Above	Yellow	Below			
18-Apr-06	Neil Fifer	Marsh Sandpiper	Not recorded	White	Above	Yellow	Below			
	Martin Hale	Marsh Sandpiper	25	White	Above	Yellow	Below			
	Martin Hale	Marsh Sandpiper	Not recorded	White	Above	Yellow	Below			
	Martin Hale	Terek Sandpiper	50	Yellow	Above					
-	Yu Yat Tung	Curlew Sandpiper	0	Orange	Above	Yellow	Below			
22-Apr-06	Yu Yat Tung	Great Knot	0	_				Yellow	above	
22-Apr-06	Yu Yat Tung	Red-necked Stint	25	Orange	Above					
24-Apr-06	Neil Fifer	Curlew Sandpiper	100	Orange	Above					
	Neil Fifer	Curlew Sandpiper	100	Yellow	Above					
26-Apr-06	Ying Hak King	Curlew Sandpiper	100	Orange	Above					
	Ying Hak King	Curlew Sandpiper	0	Orange	Above	X7 **				
26-Apr-06		Marsh Sandpiper	0	White	Above	Yellow	Below			
-	Yu Yat Tung	Curlew Sandpiper	75	0		Yellow	Below			
-	Yu Yat Tung	Curlew Sandpiper	100	Orange	Above					
28-Apr-06	Yu Yat Tung	Curlew Sandpiper	100	Orange	Above					
28-Apr-06	Yu Yat Tung	Curlew Sandpiper	100	Orange	Above					
28-Apr-06	Yu Yat Tung	Sanderling	0	Orange	Above	N/ 11	D I			
	Yu Yat Tung	Common Redshank	Not recorded	White	Above	Yellow	Below			
6-May-06	Yu Yat Tung	Red-necked Stint	50	Orange	Above	V - 11	Dalam			
	0 0	Common Greenshank	0	White	Above	Yellow	Below			
-	0 0	Common Greenshank	0	White	Above	Yellow	Below			
		Curlew Sandpiper	100	White	Above	Yellow	Below			
	0 0	Red-necked Stint	25	Orange	Above					
-	0 0	Red-necked Stint	25	Orange	Above					
		Red-necked Stint	50	Orange	Above					
	0 0	Red-necked Stint	75	Orange	Above					
	Yu Yat Tung	Red-necked Stint	75	Orange	Above	X7 11	D I			
	Yu Yat Tung	Red-necked Stint	50	Orange	Above	Yellow	Below			
	Neil Fifer	Red-necked Stint	50	Orange	Above					
	Neil Fifer Yu Yat Tung	Red-necked Stint	50	Orange	Above					
	Yu Yat Tung	Red-necked Stint Red-necked Stint	50 0	Orange	Above					
	Yu Yat Tung	Red-necked Stint	25	Orange	Above Above					
	Yu Yat Tung	Red-necked Stint		Orange						
	0		50	ç	Above					
-	Yu Yat Tung Yu Yat Tung	Red-necked Stint Red-necked Stint	75 100	Orange	Above Above					
	Neil Fifer		100	Orange White	Above	Yellow	Below			
		Terek Sandpiper Red-necked Stint	25		Above	Tellow	Below			
	Yu Yat Tung	Red-necked Stint	25	Orange	Above					
	Yu Yat Tung	Curlew Sandpiper	50	Orange Orange	Above					
	Yu Yat Tung Yu Yat Tung	Red-necked Stint	50	Orange	Above					
		Curlew Sandpiper	100	Orange	Above					
	Tam Yip Shing Tam Yip Shing	Curlew Sandpiper	75	Orange	Above					
22-Apr-06	Tam Yip Shing	Curlew Sandpiper	100	Orange	Above					
22-Apr-06	Tam Yip Shing	Curlew Sandpiper	100	Orange	Above					
22-Apr-06	Tam Yip Shing	Curlew Sandpiper	50	Orange	Above					
-		Common Redshank	100	Yellow	Above					
22-Api-00	ram rip sning	Common Reusliank	100	1 CHOW	ADOVE					<u> </u>